

Fig. 1a

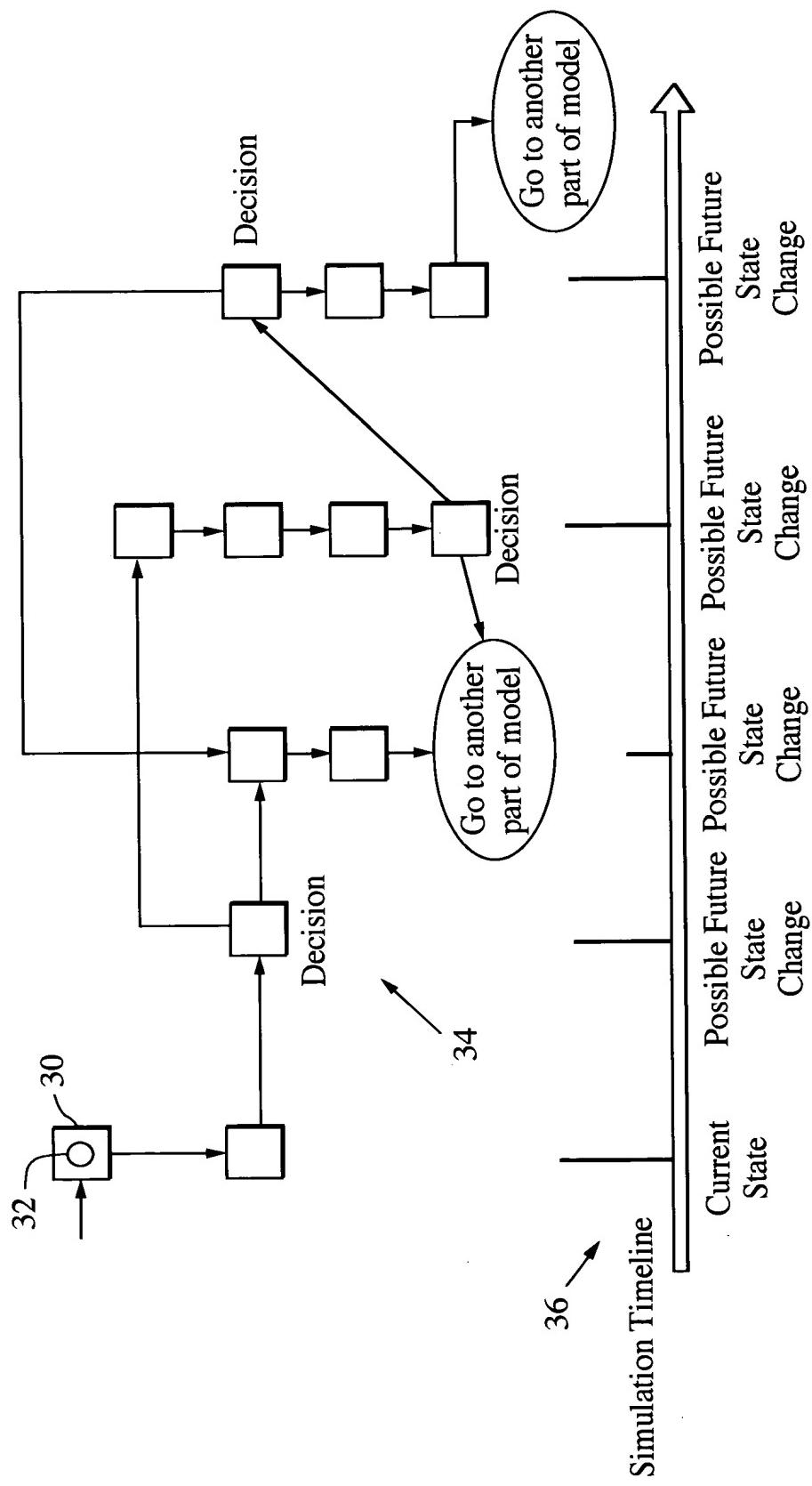


Fig. 1b

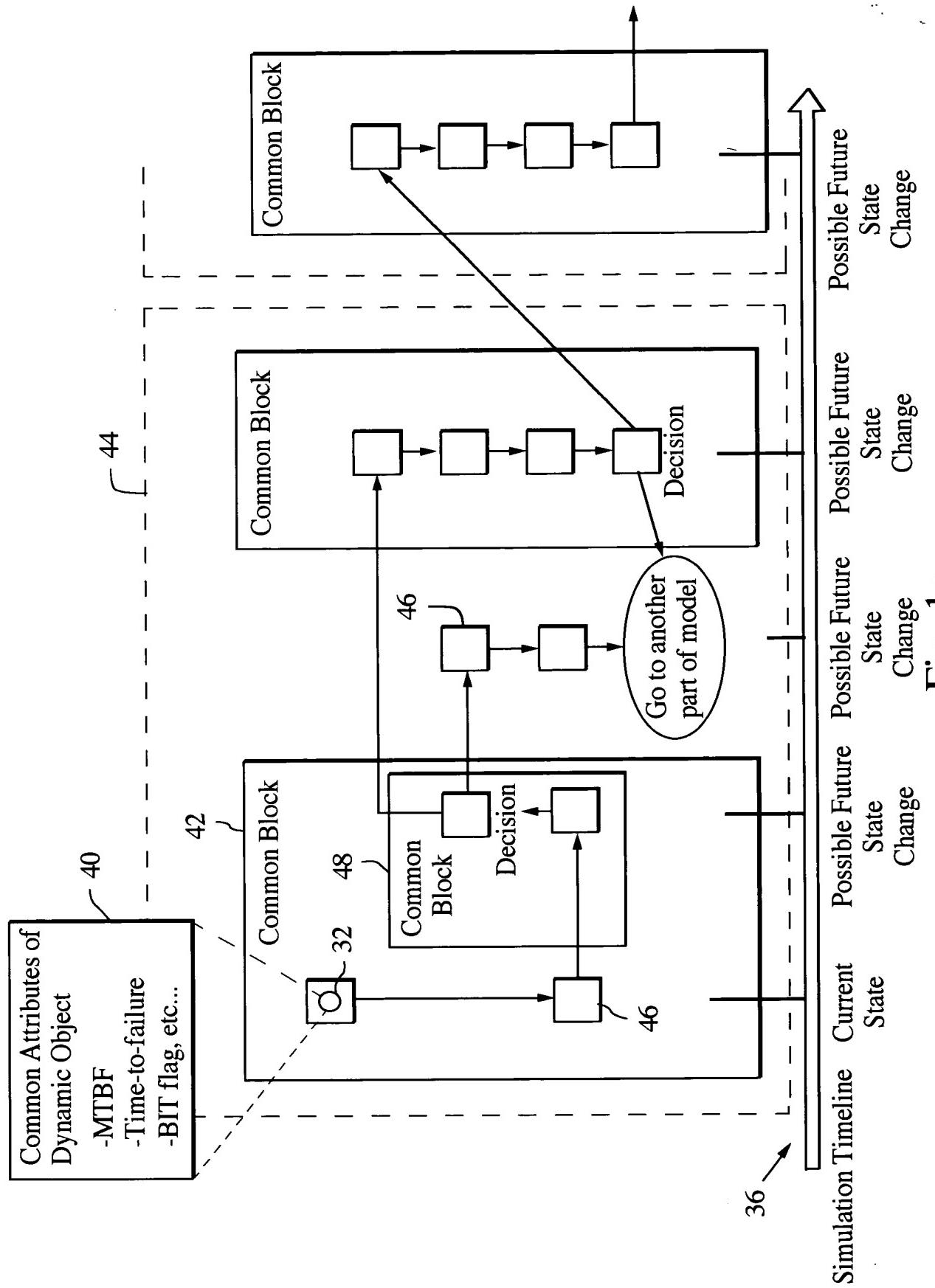


Fig. 1c

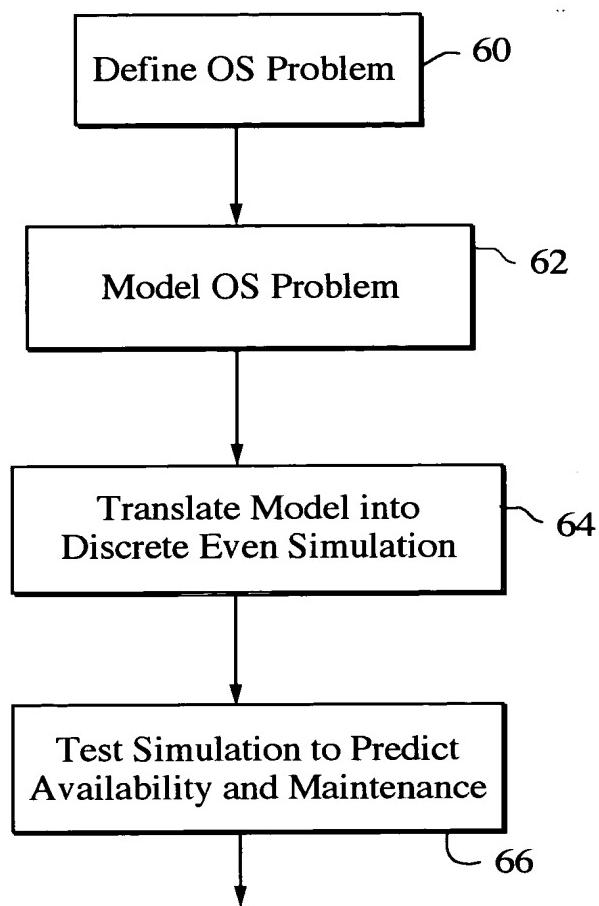


Fig. 2

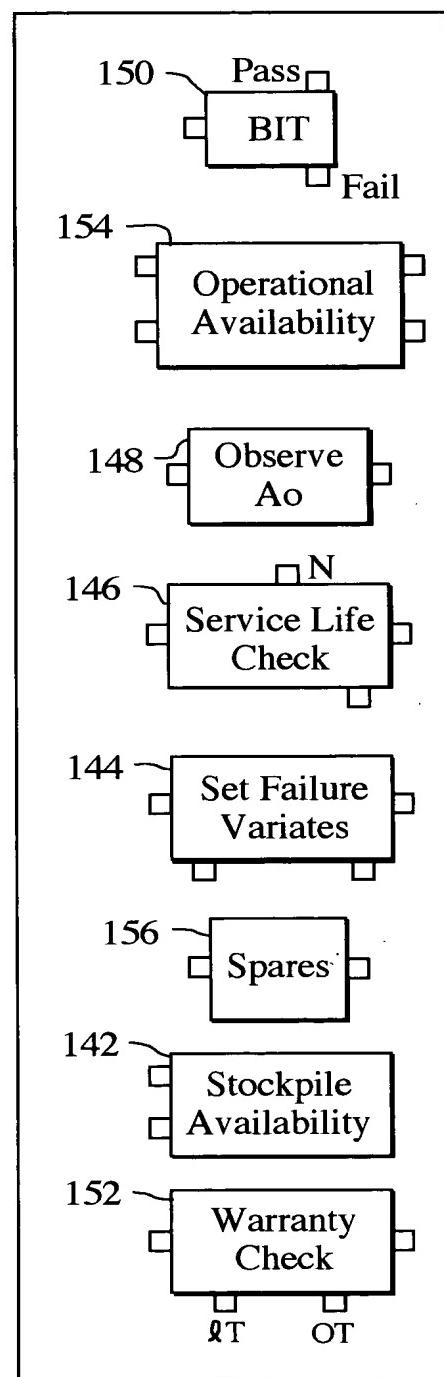
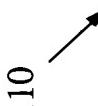


Fig. 7

ATTRIBUTE (m=multiple)	PURPOSE
Birth Date 82	Stores times at which Hardware first enters the O&S process.
TTF Variate (m) 84	Stores time at which hardware will fail. Randomly determined. Multiple attributes for multiple environments. These are set/reset whenever hardware is issued/reissued.
Duty Cycle (m) 86	Accumulators for time or cycles spent in various states/environments. These are reset to zero whenever hardware is reissued.
Warranty Cycle (m) 88	Accumulators for time or cycles spent in various states/environments. These are never reset.
Down Time 90	Accumulator for time spent while hardware is not RFI.
MTBF Variate (m) 92	Stores Mean Time Between Failure for specific environments. These can change over time to approximate reliability growth or hardware degradation over time.
BitDetectable 94	Randomly generated flag to indicate if a test will be effective at detecting a failure in the weapon hardware.
Weapon Variant (m) 96	Marks the dynamic object as being a particular type of weapon.
GodsEye 97	Marks the dynamic object that is in a failed state as being failed, if the dynamic object has a failure not detectable by field BIT.

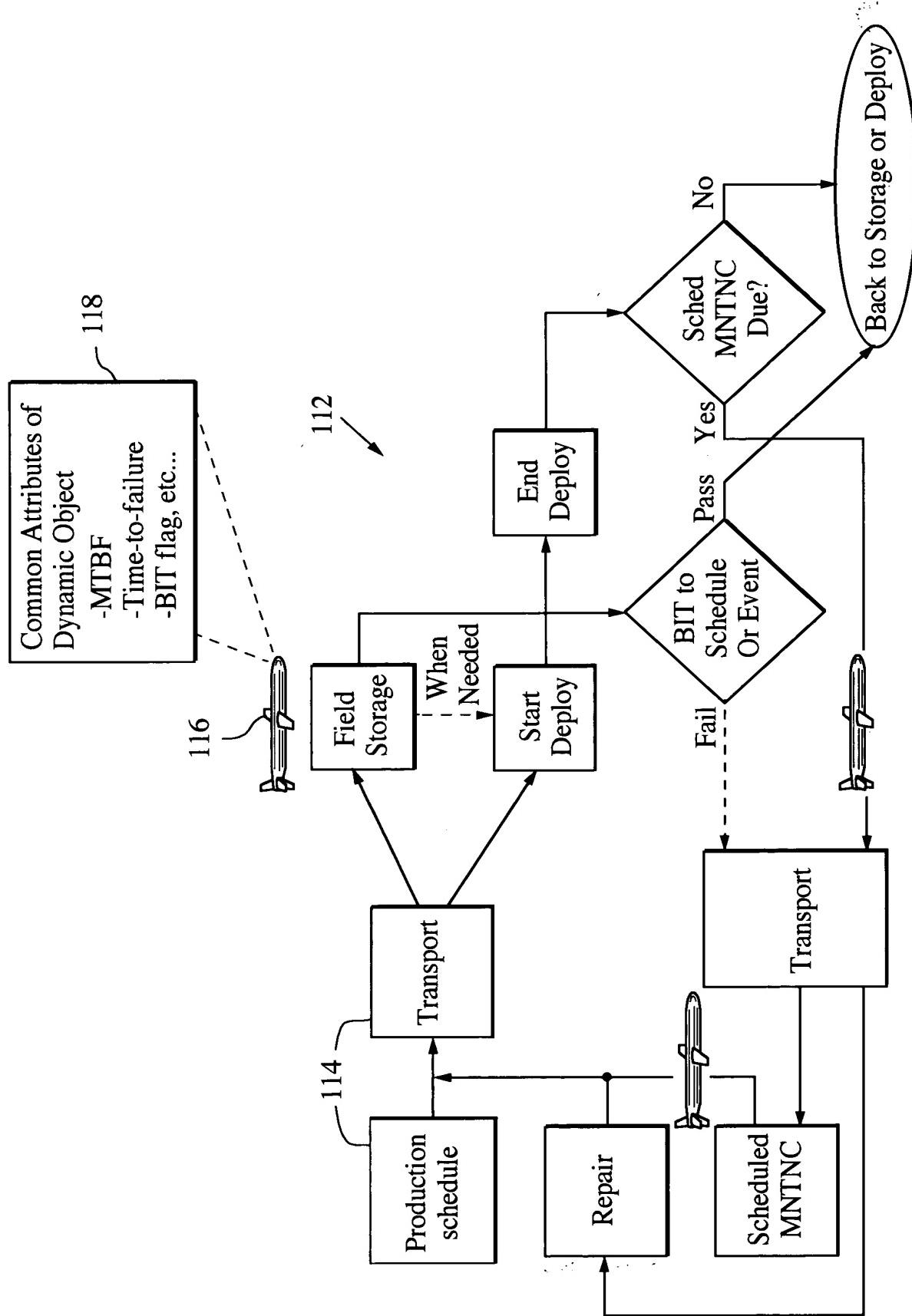
Fig. 3



Decomposition of SUP & calculation of time-based observations.	Common Blocks
Assessing availability, predicting repair action (warranted & not warranted), predicting spare part requirements, characterizing multiple failure on a weapon.	Sub-Models
Service Use Profile	DES Static Object
Weapon Hardware Unit	DES Dynamic Object
Decision Occurrence during Weapon System Life-cycle	State Change during Simulation
Specific Characteristic of Individual Weapons	Attributes of Dynamic Objects
Special Treatment for Sub-populations of Weapons	Dynamic Object interaction with DES Static Object, through attributes values common among sub-groups of Dynamic Objects.

Fig. 4

Fig. 5



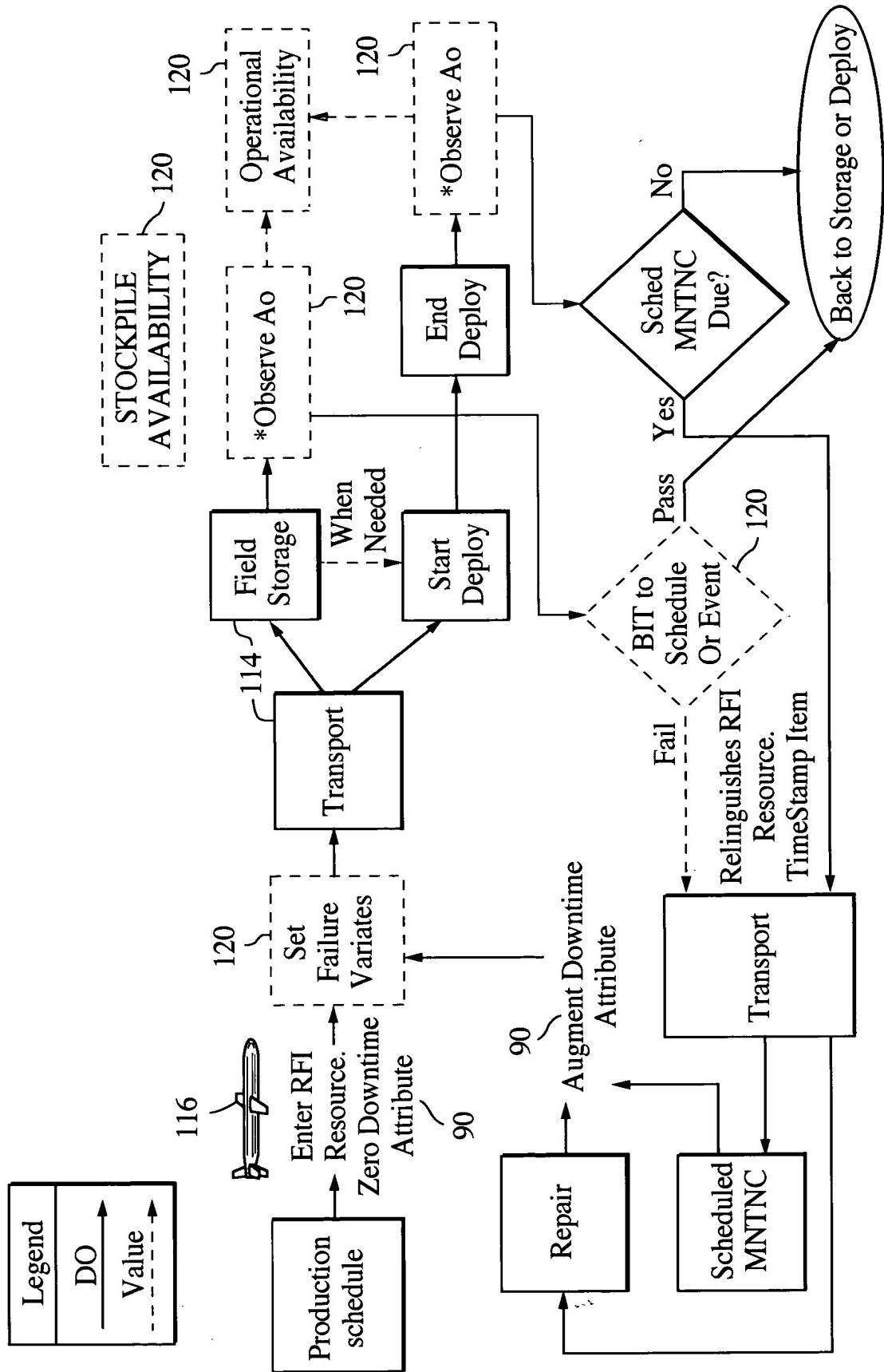


Fig. 6

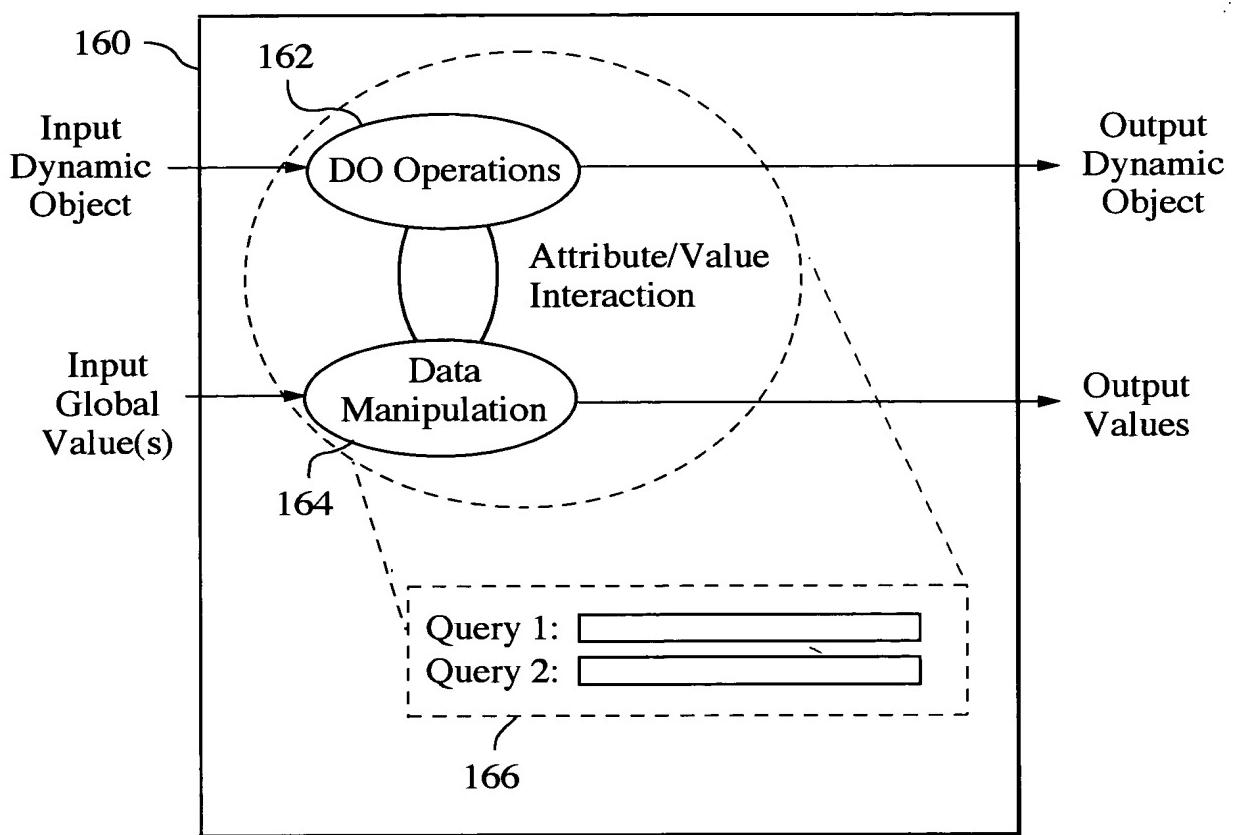


Fig. 8

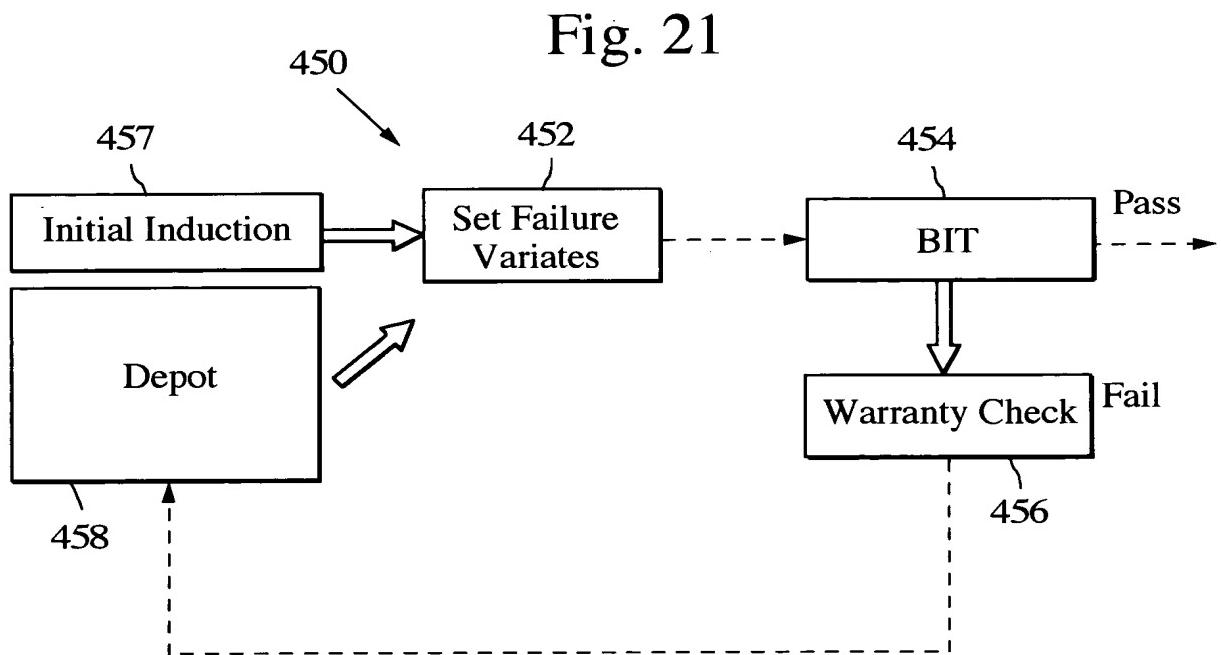


Fig. 21

Fig. 9

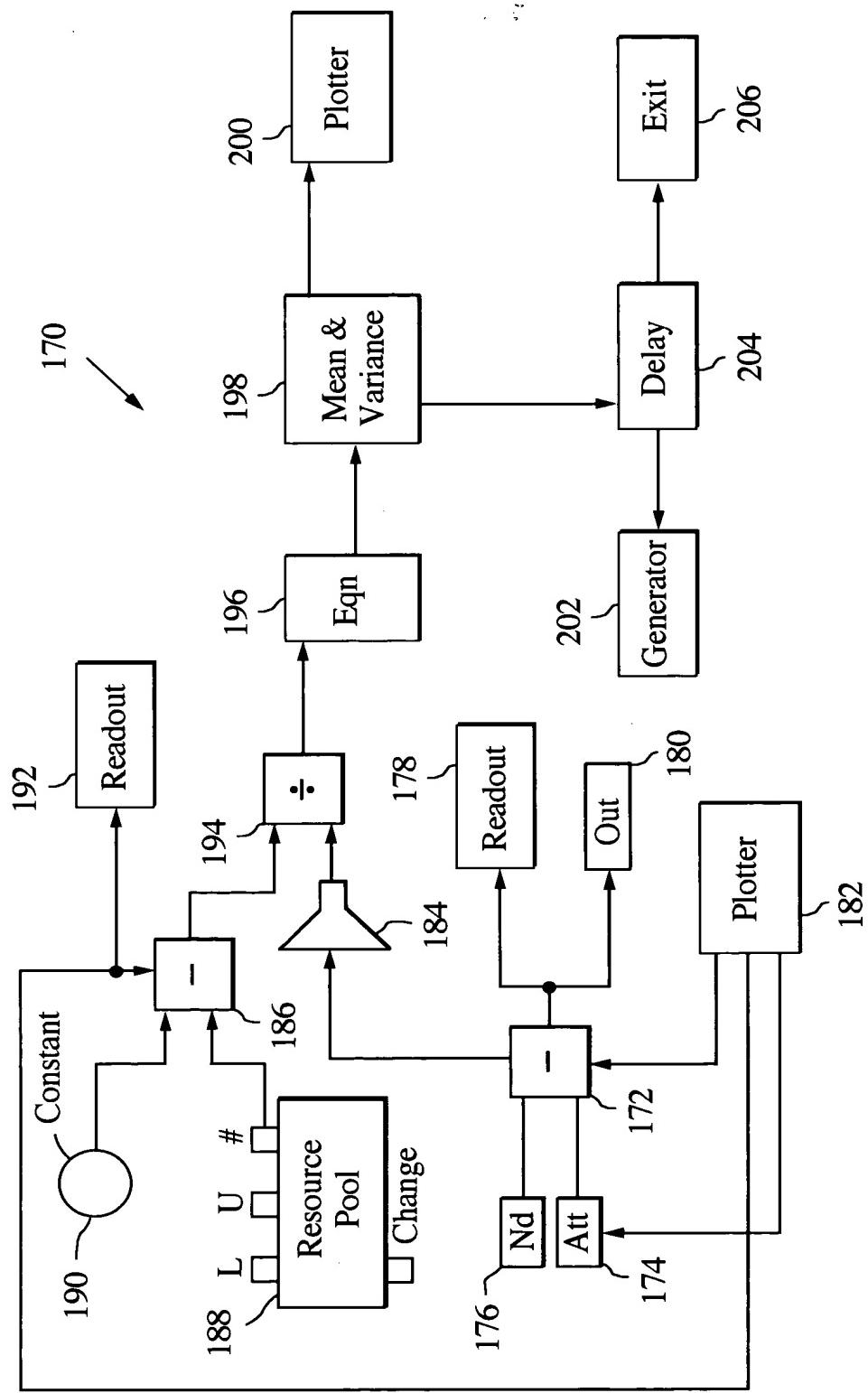


Fig. 10

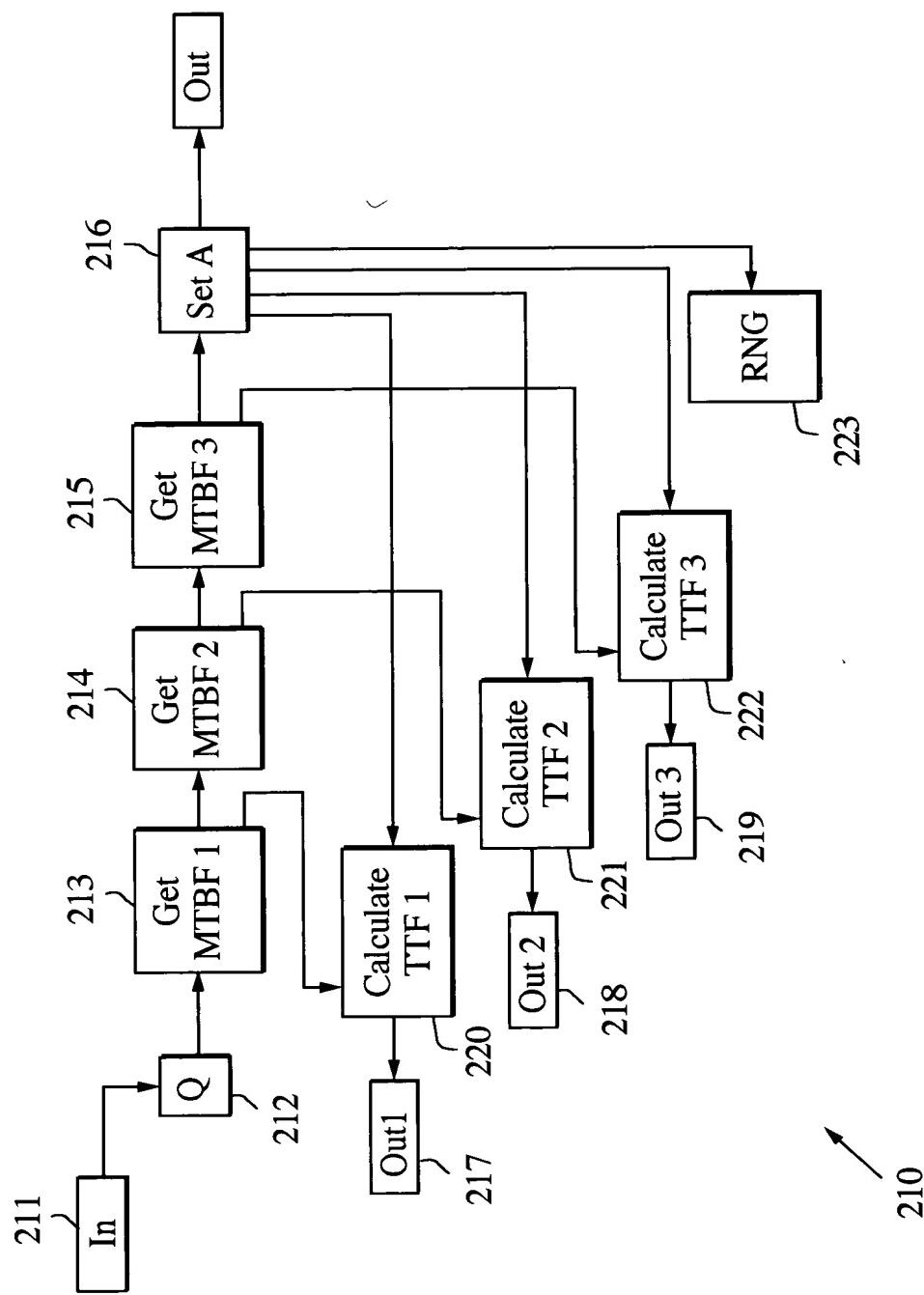
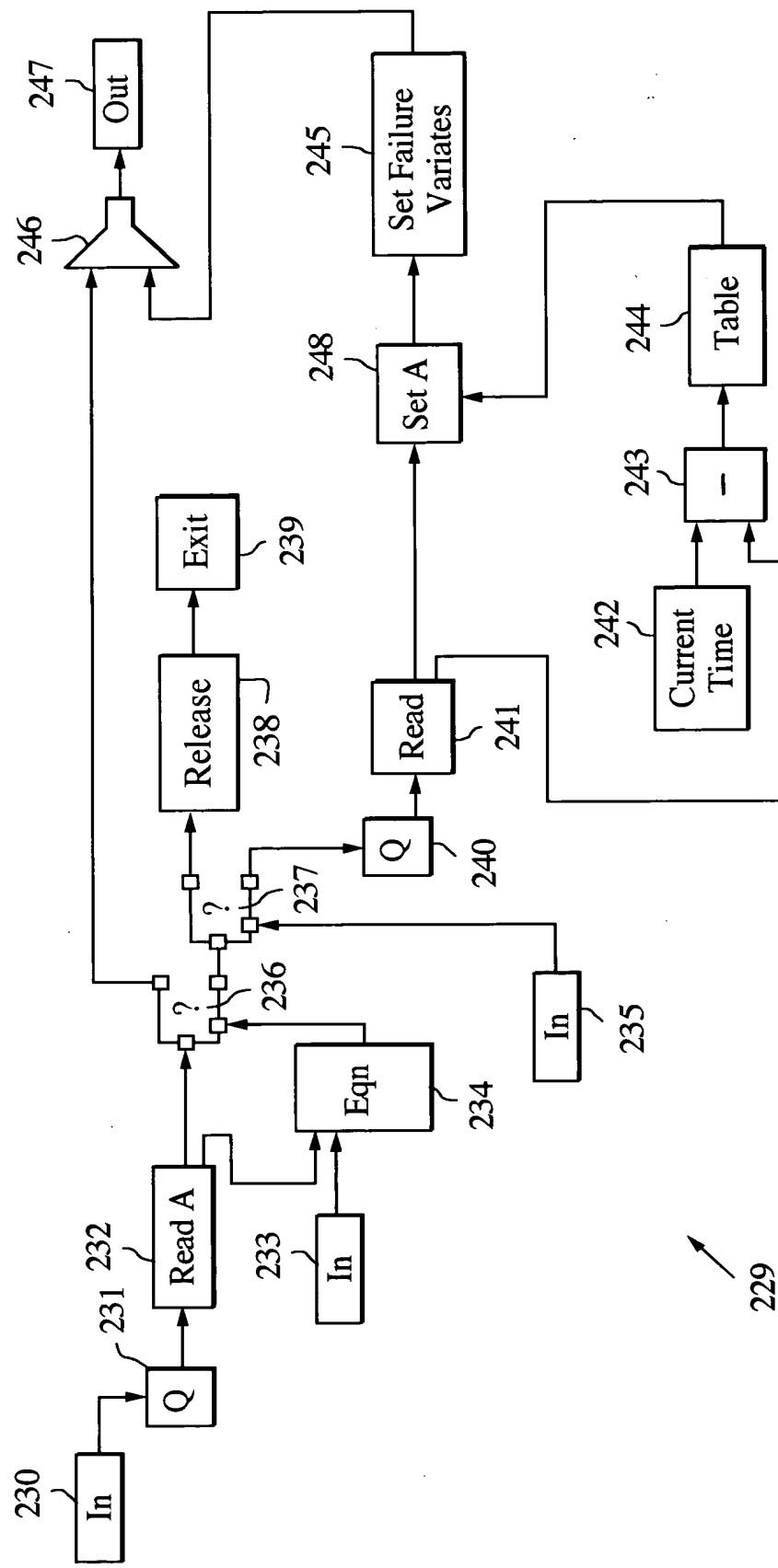


Fig. 11



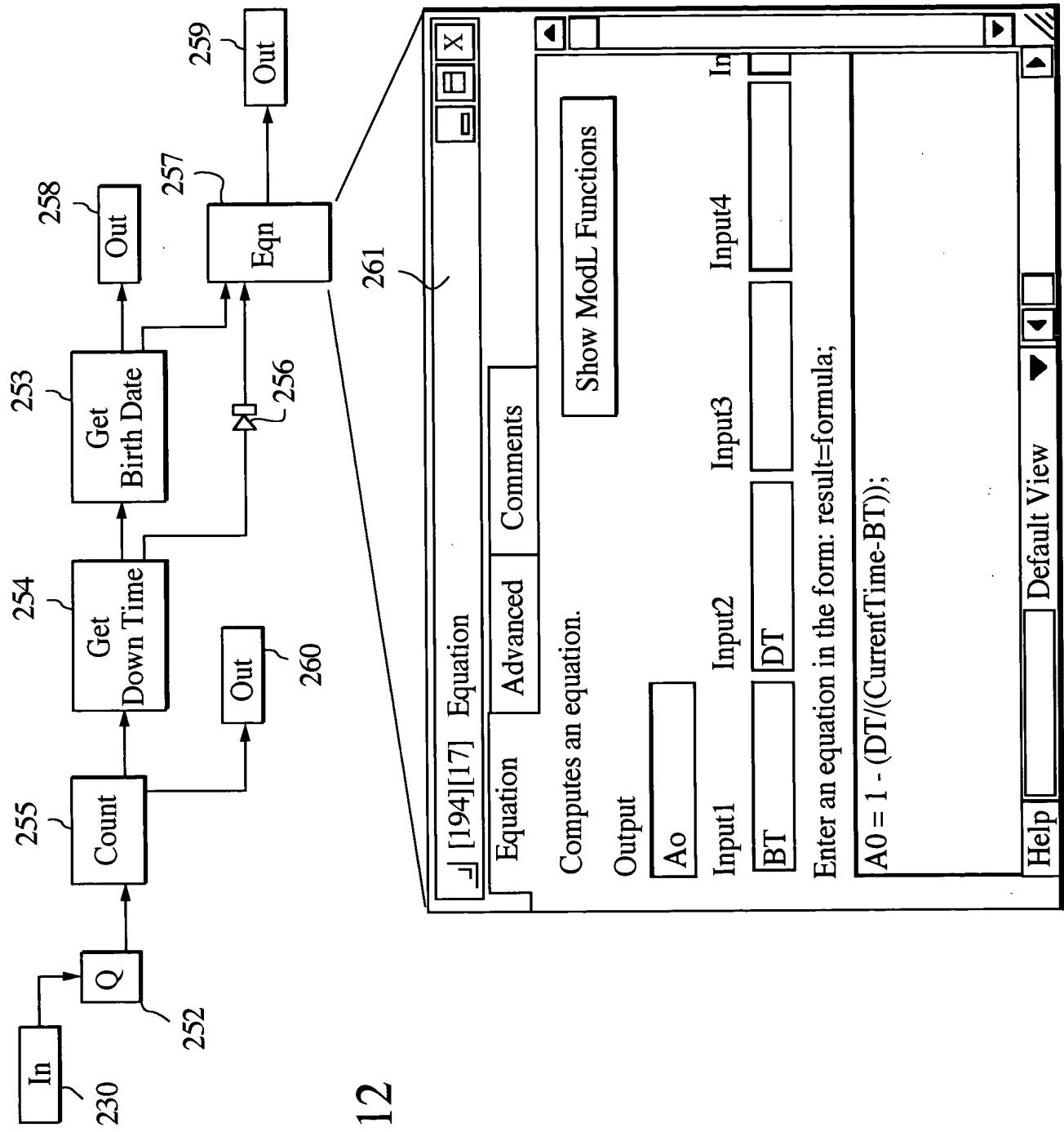


Fig. 12

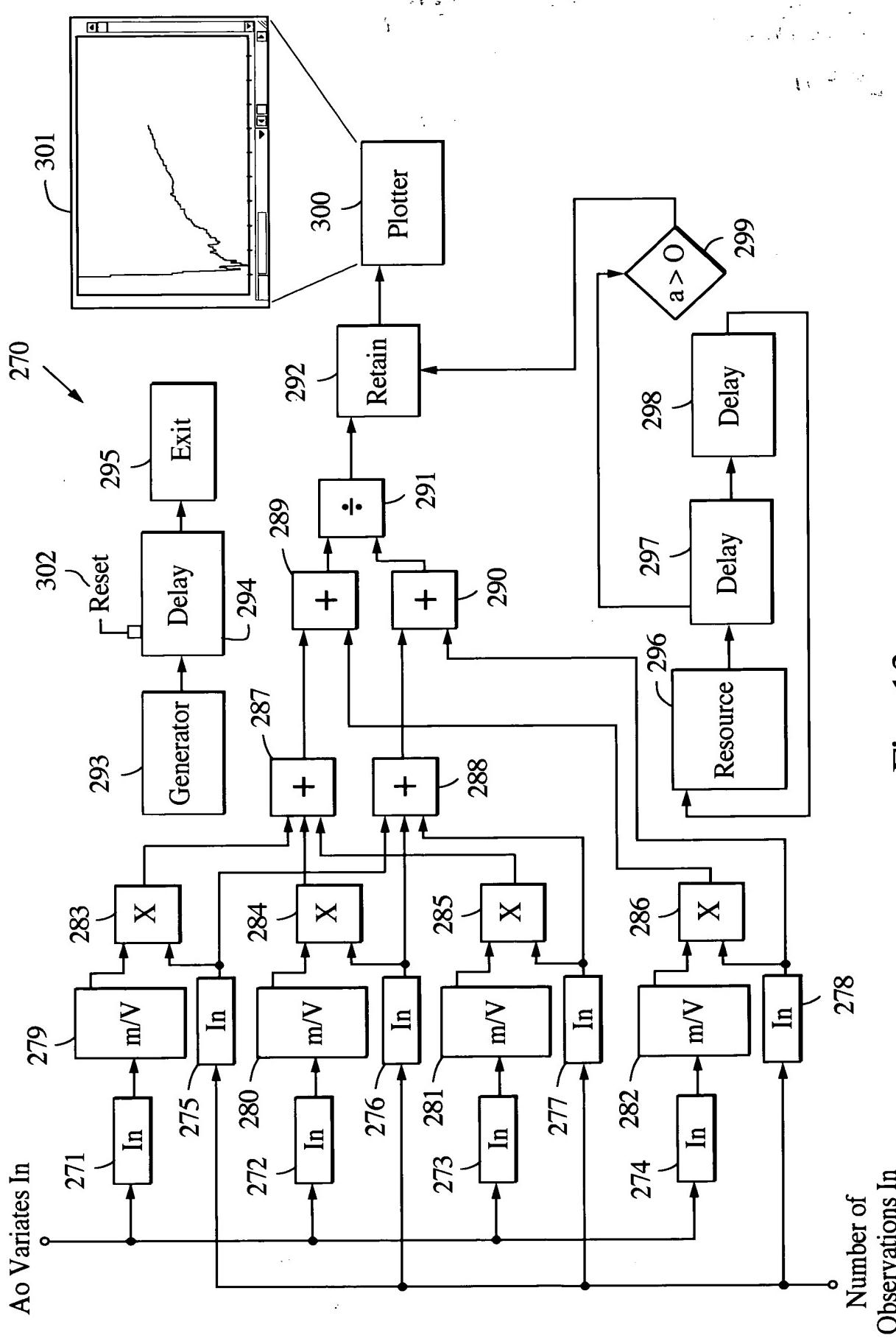


Fig. 13

Number of
Observations In

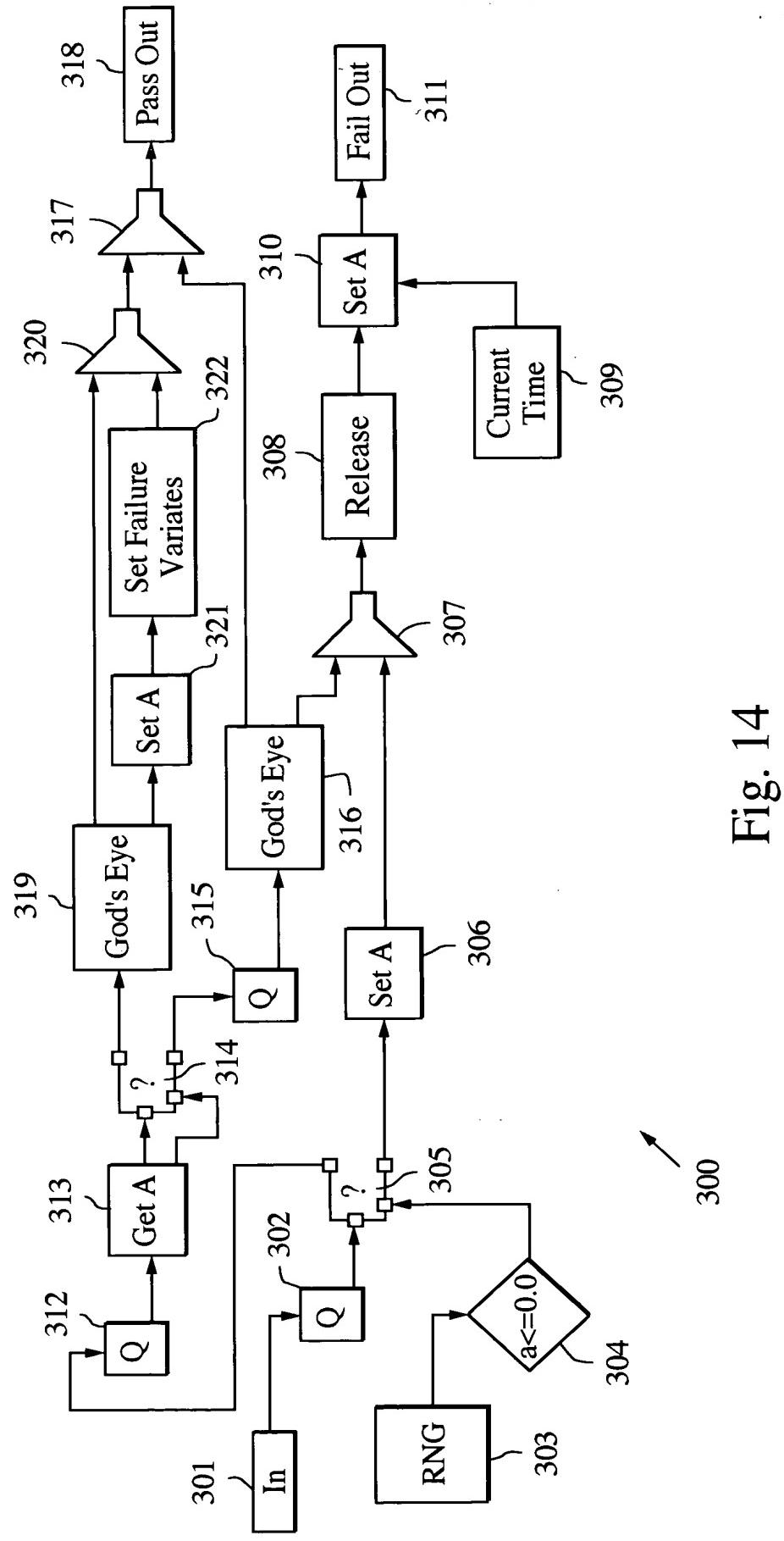


Fig. 14

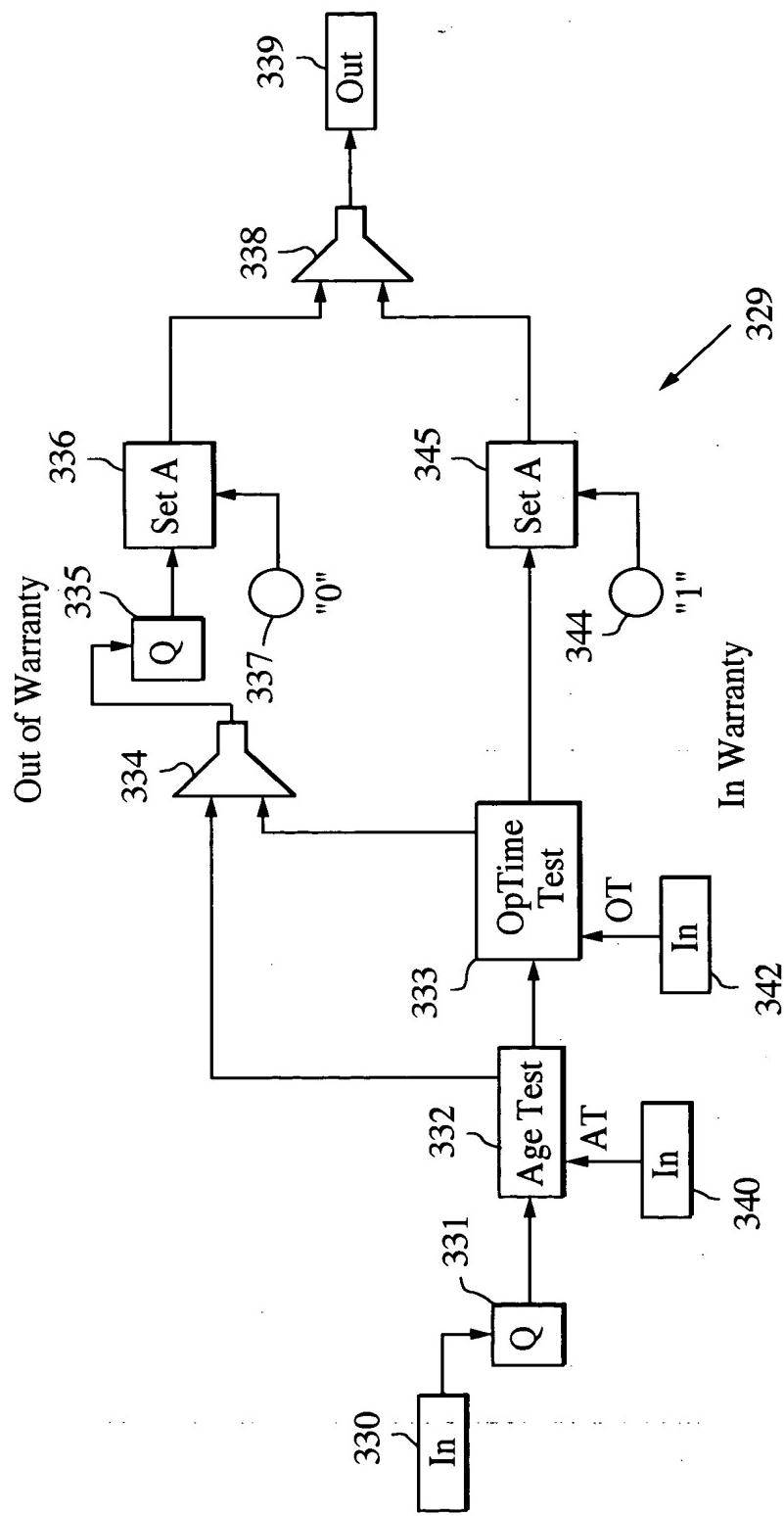


Fig. 15

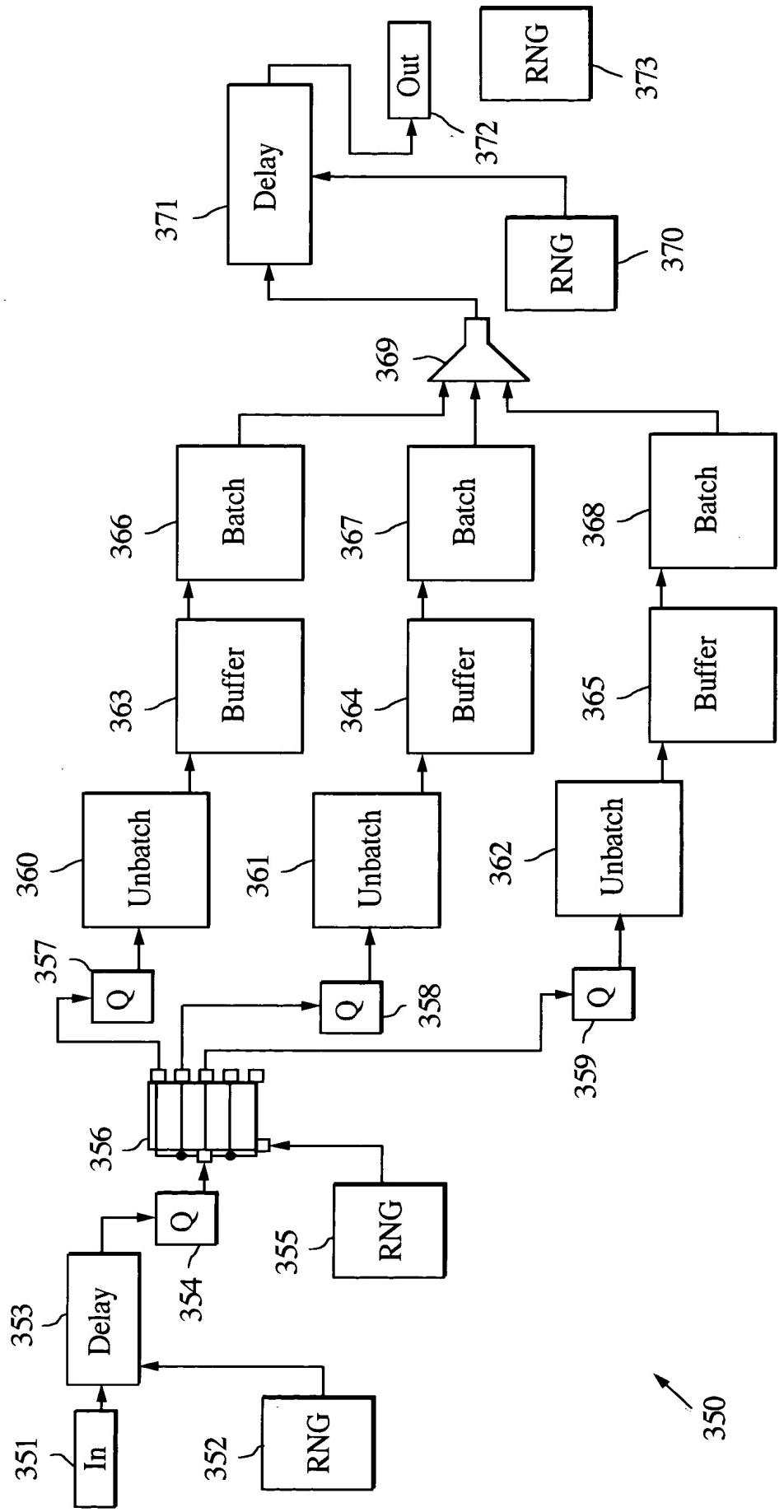


Fig. 16a

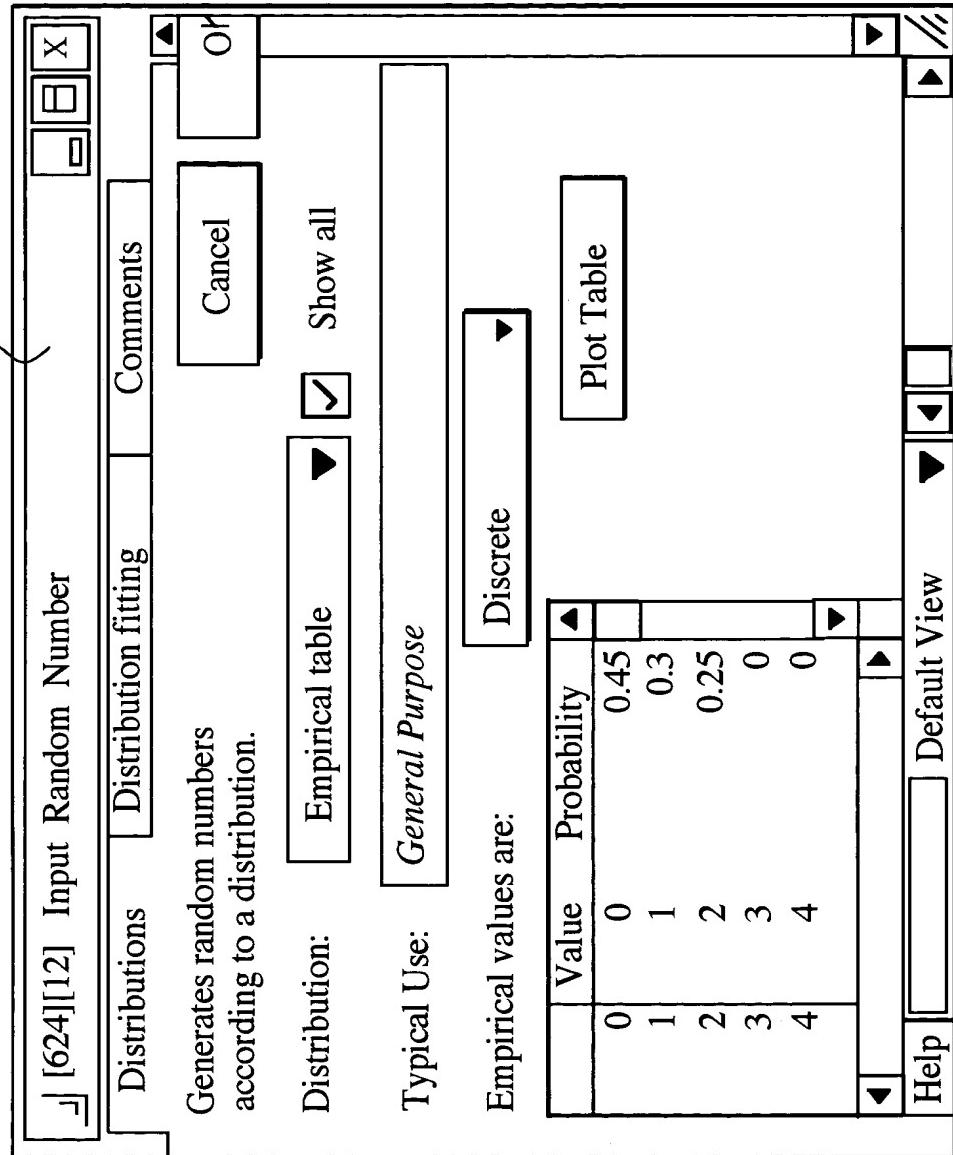


Fig. 16b

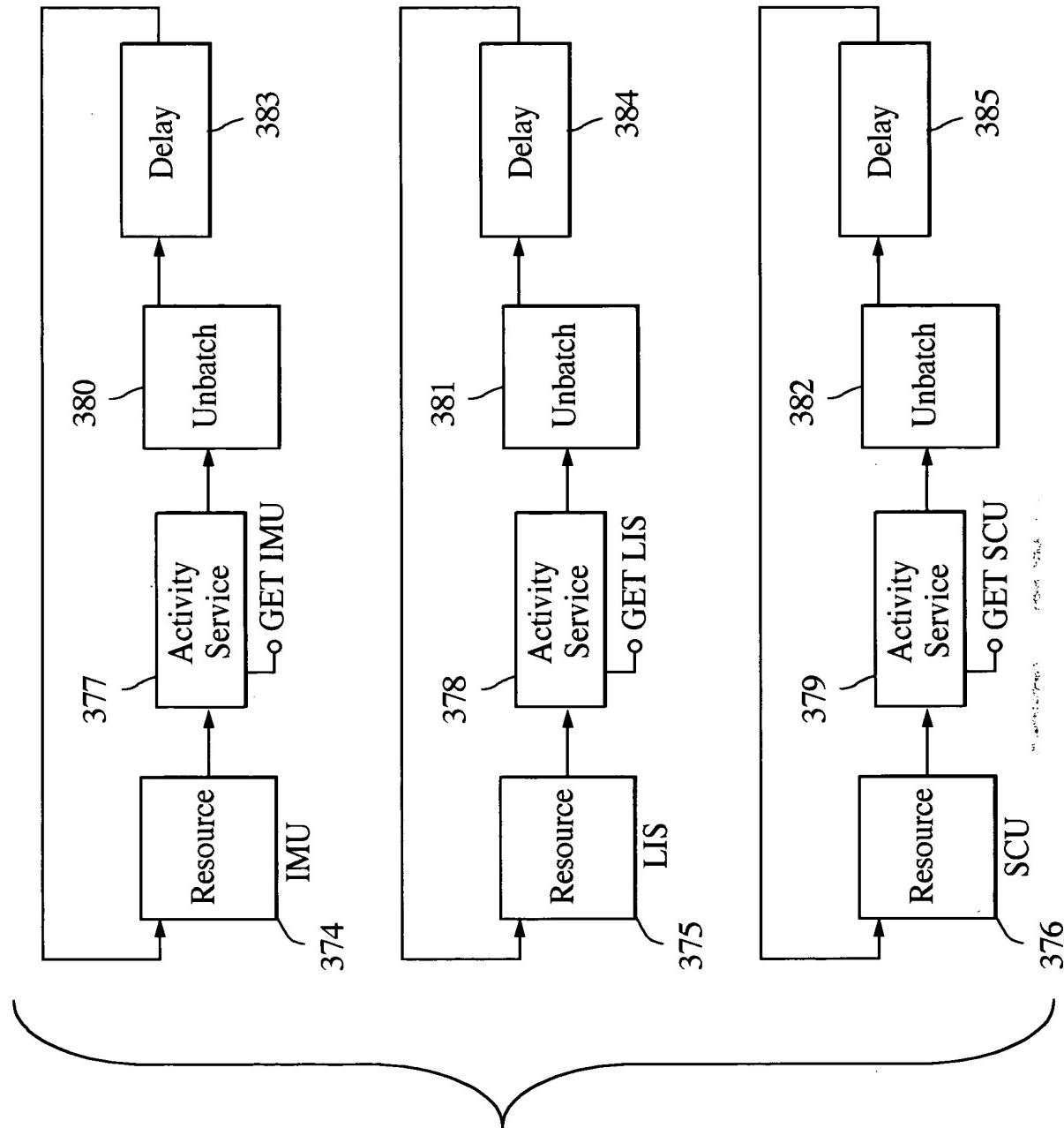


Fig. 16C

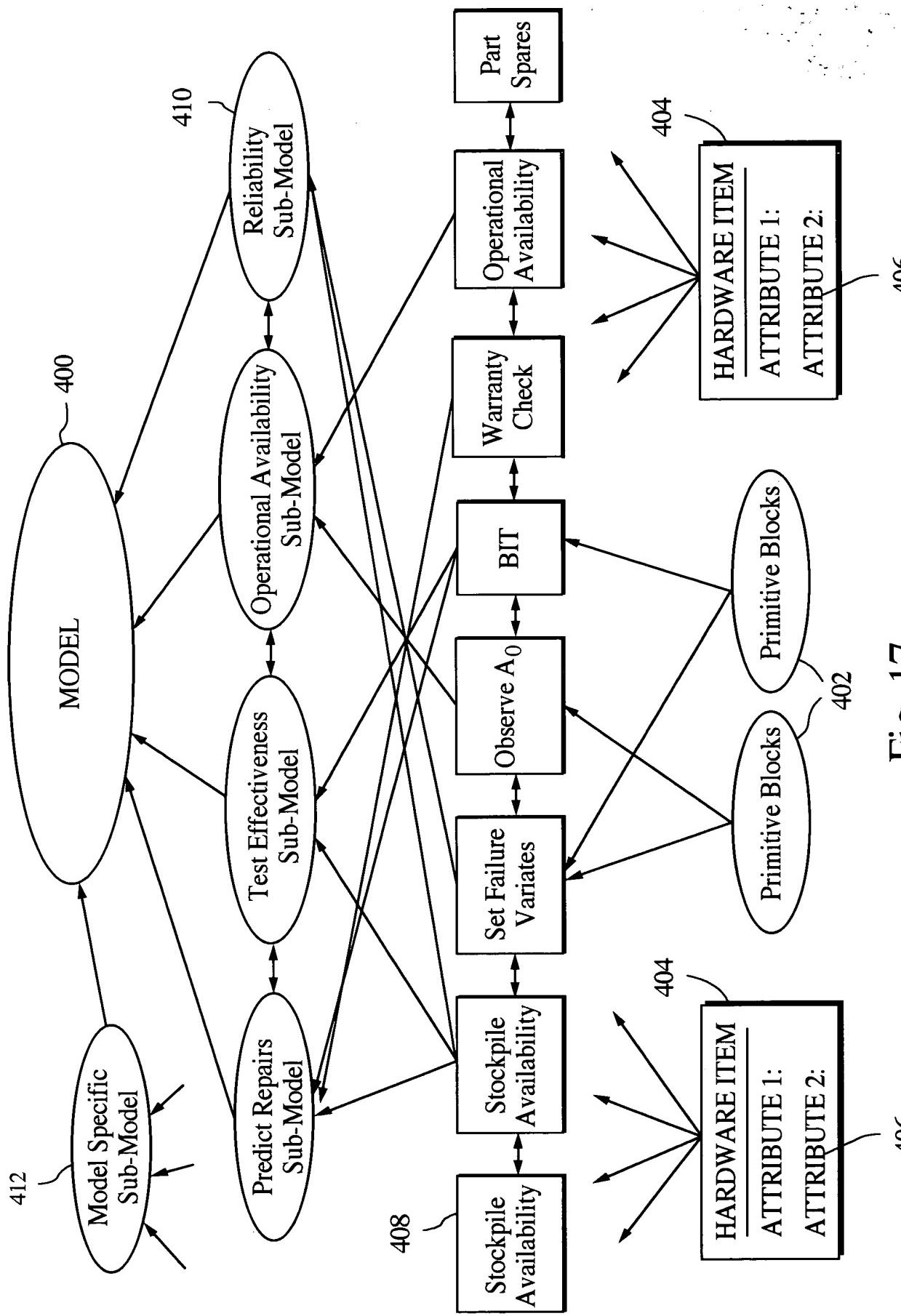


Fig. 17

406

408

404

404

410

412

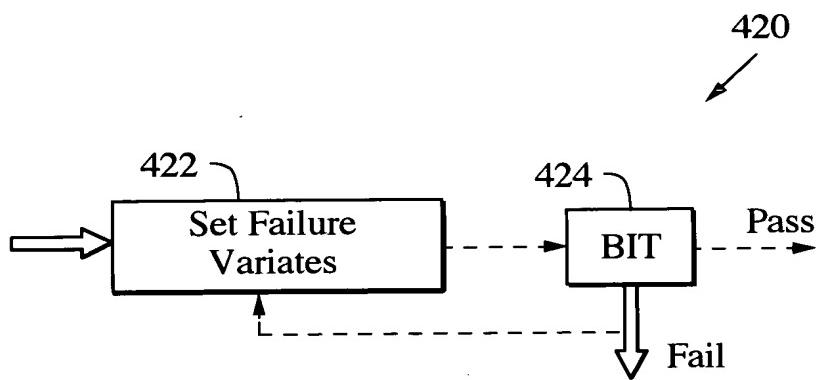


Fig. 18

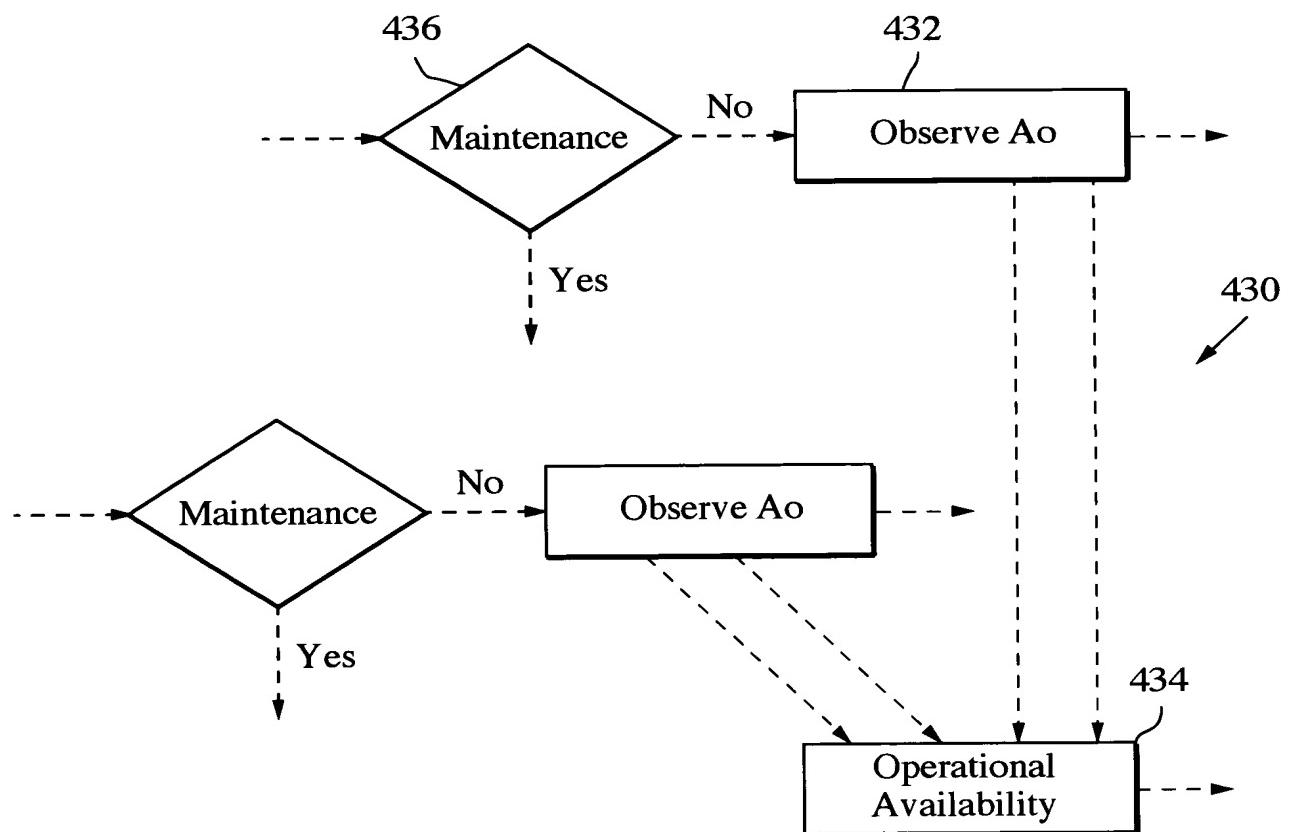


Fig. 19

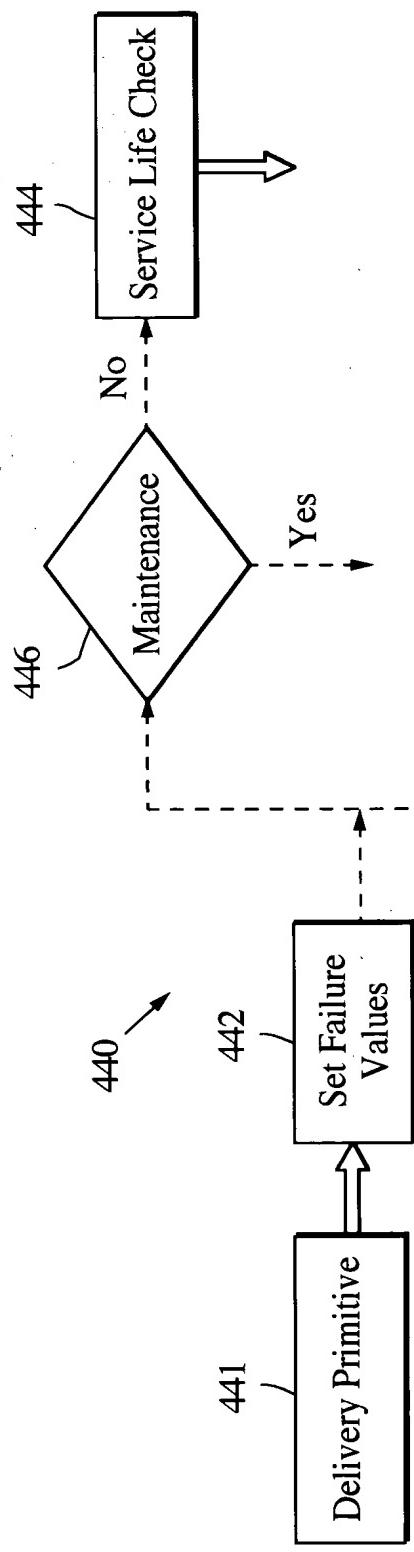


Fig. 20

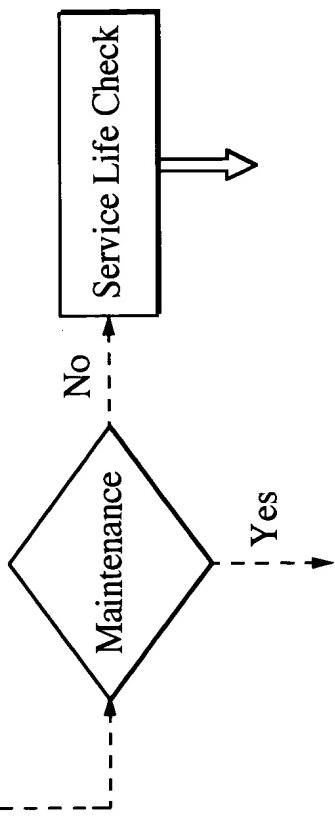
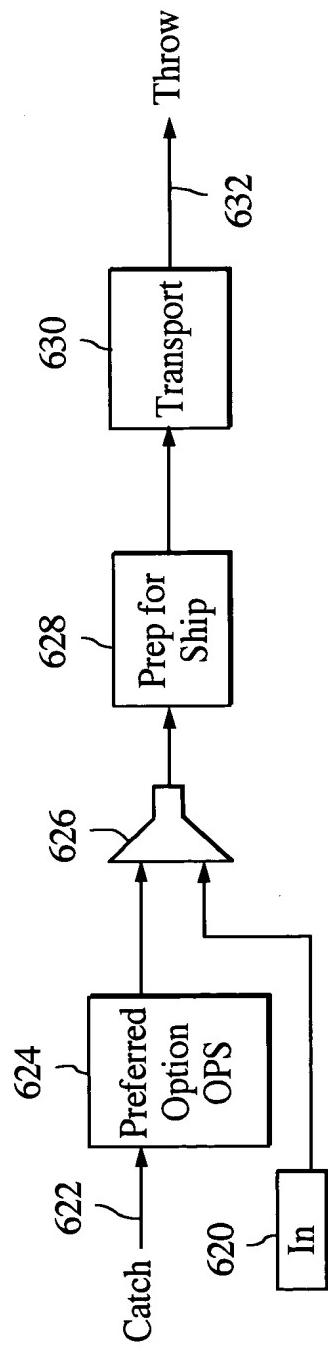


Fig. 26



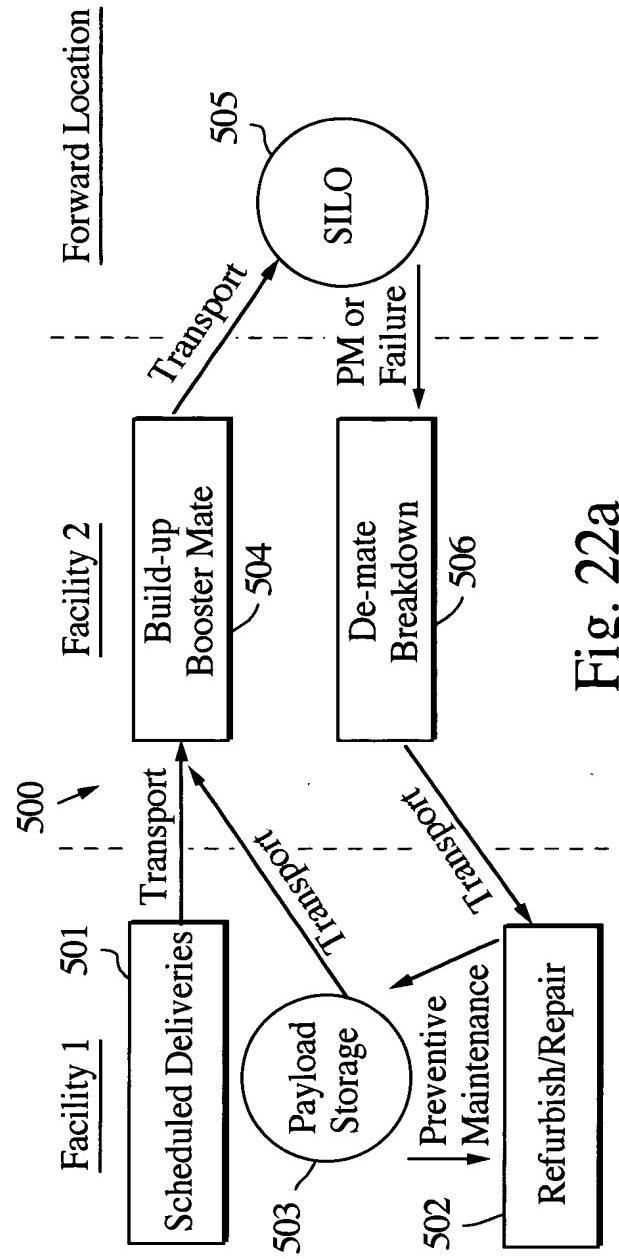


Fig. 22a

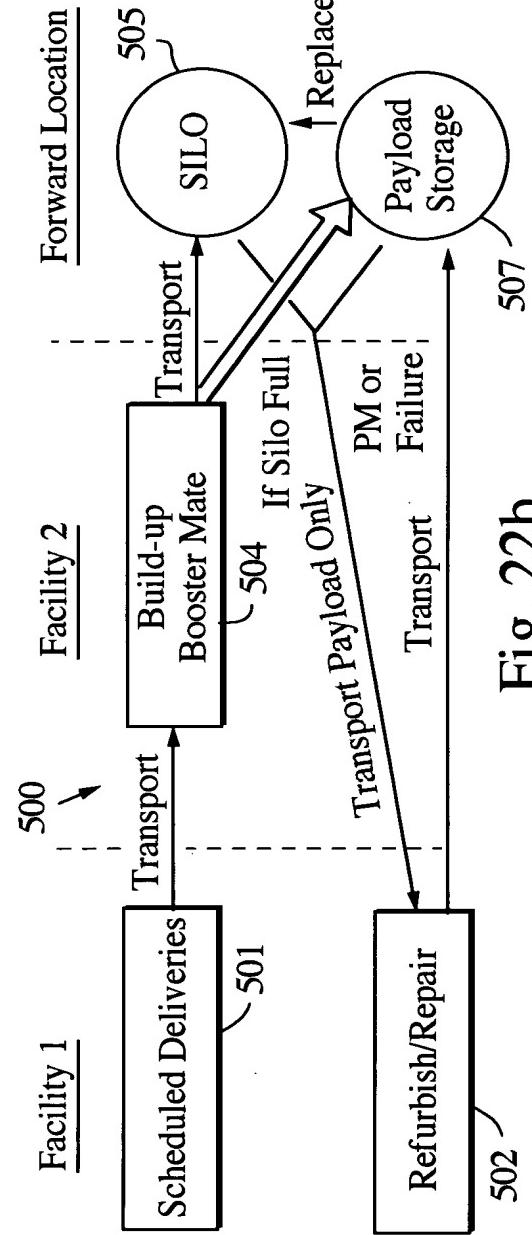


Fig. 22b

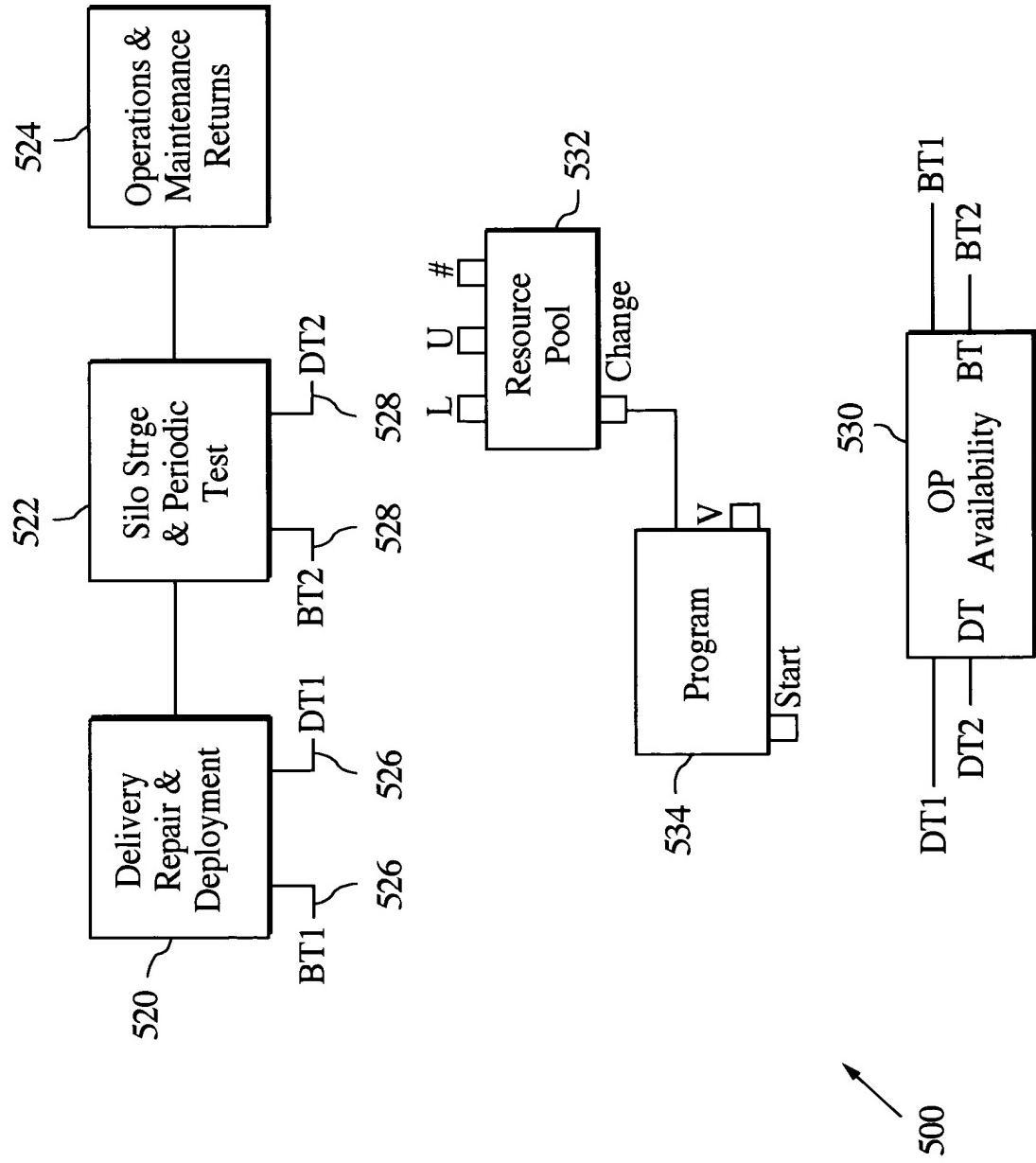


Fig. 23

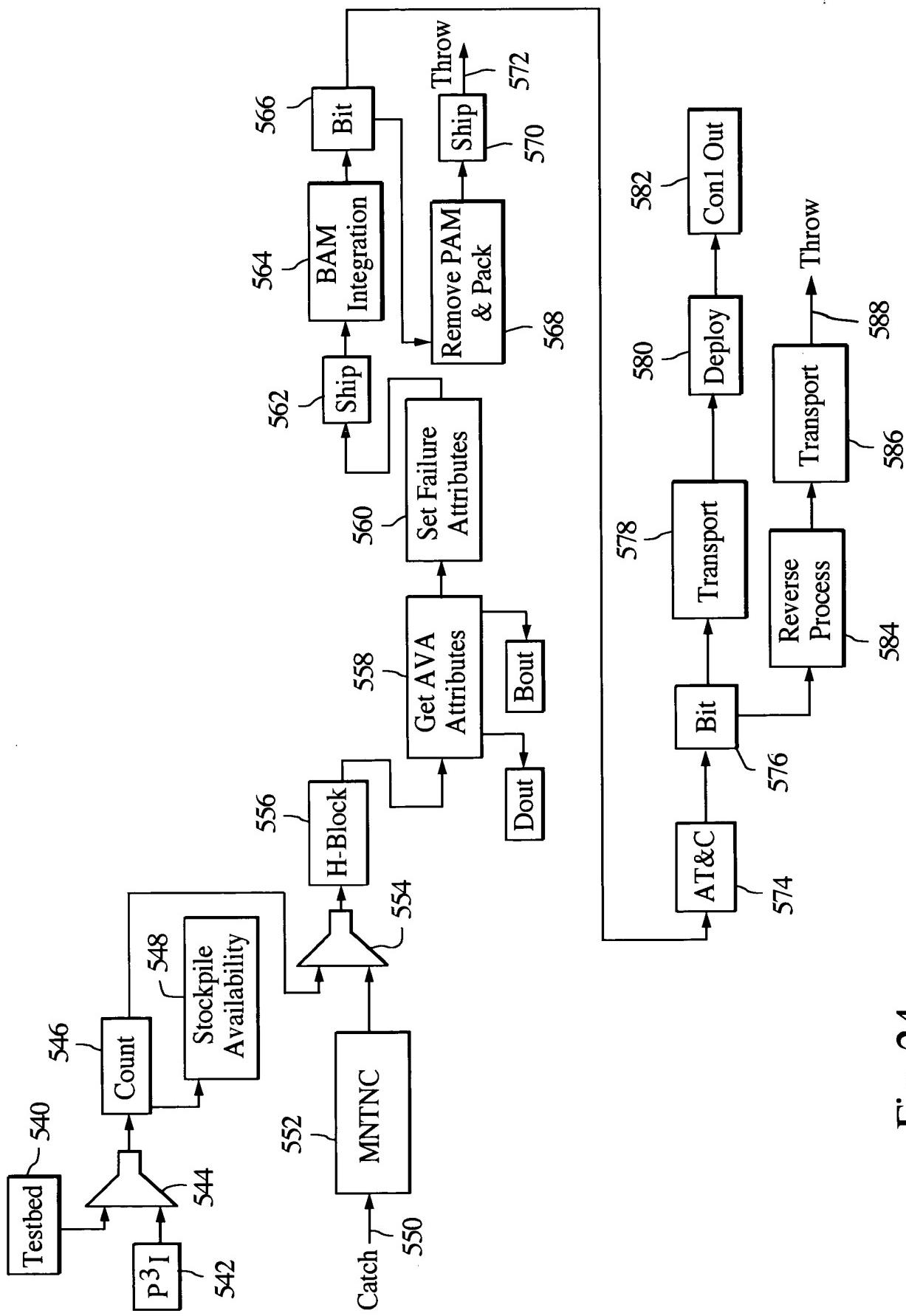
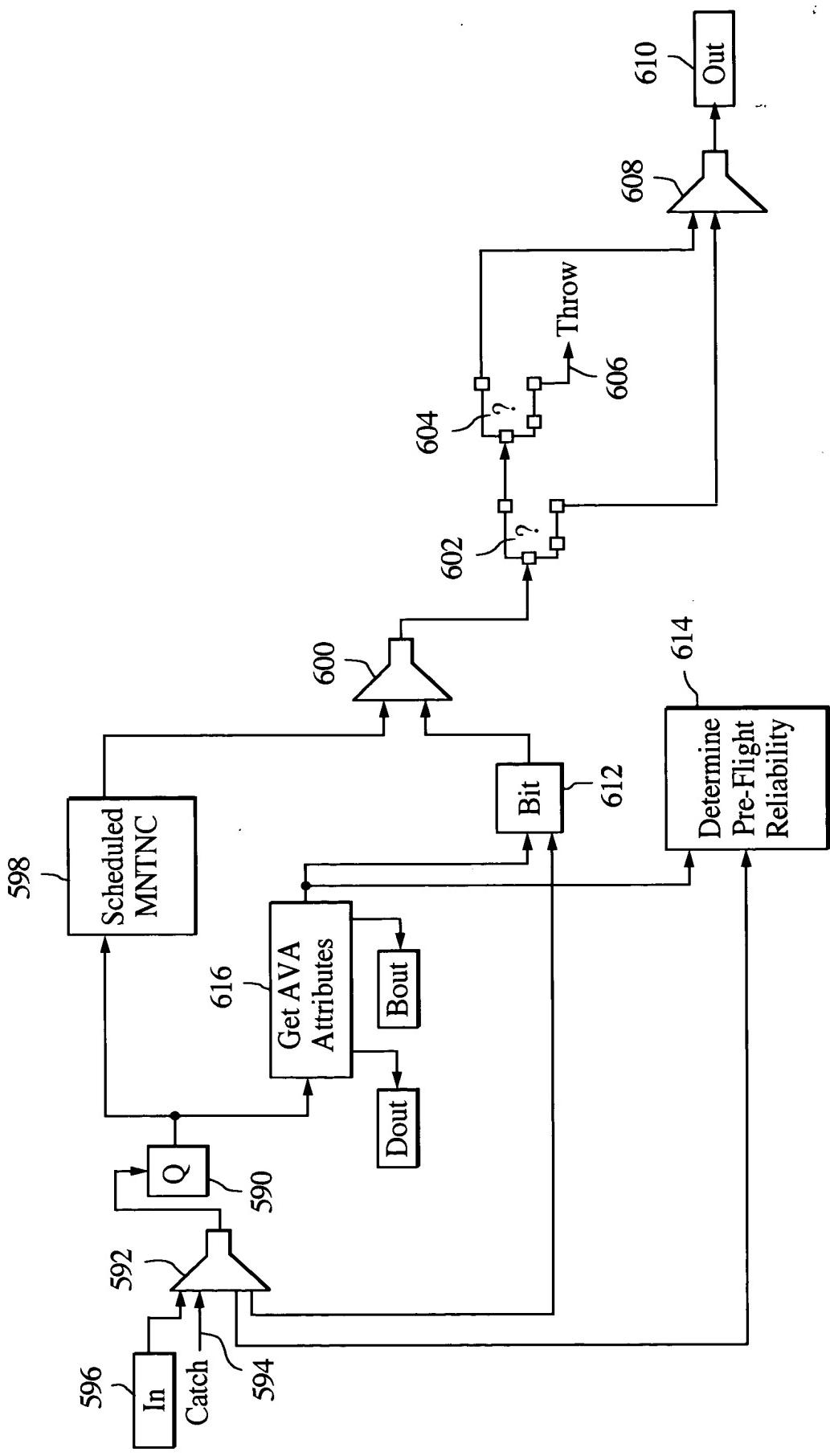


Fig. 24

Fig. 25



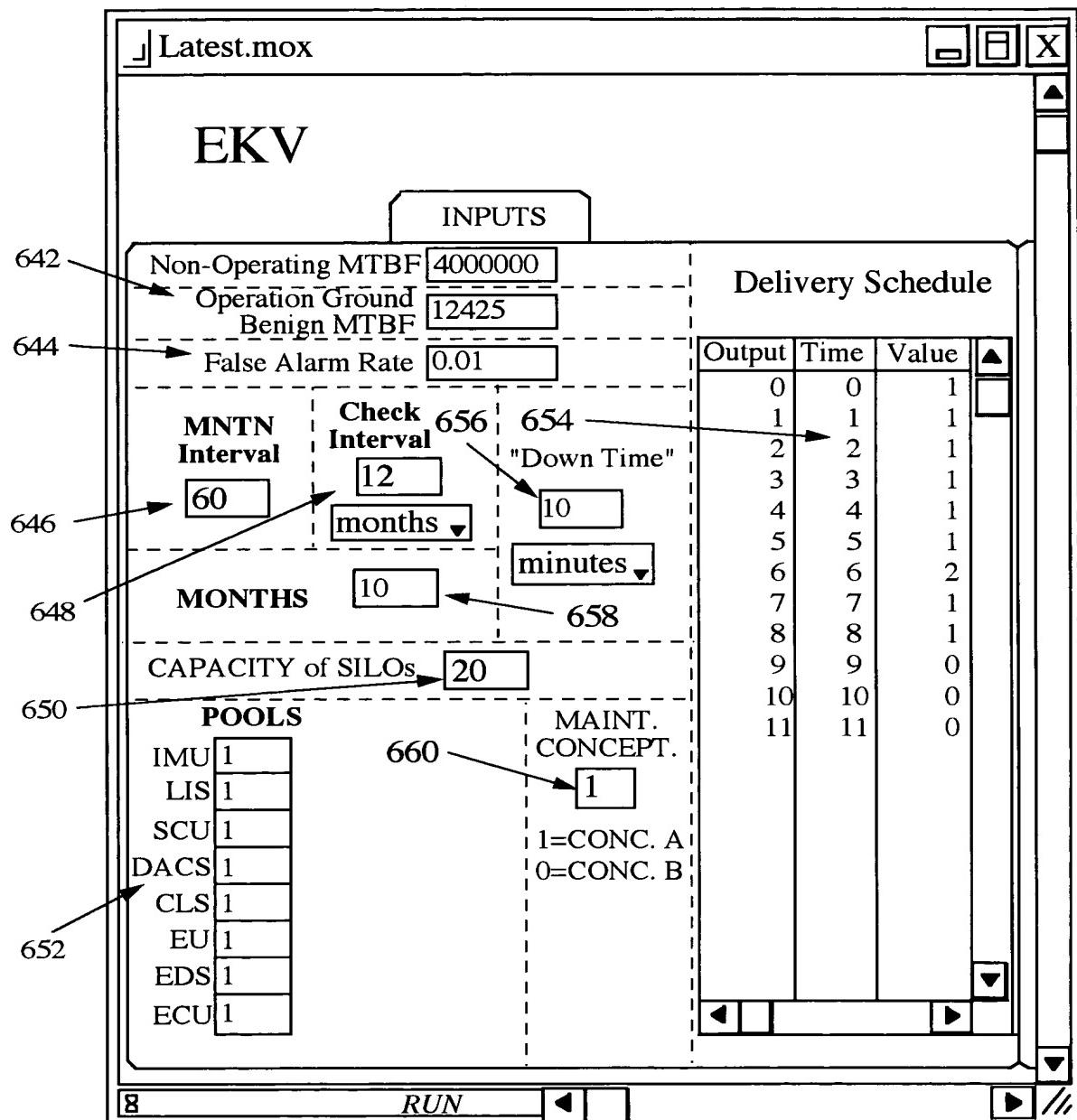


Fig. 27a

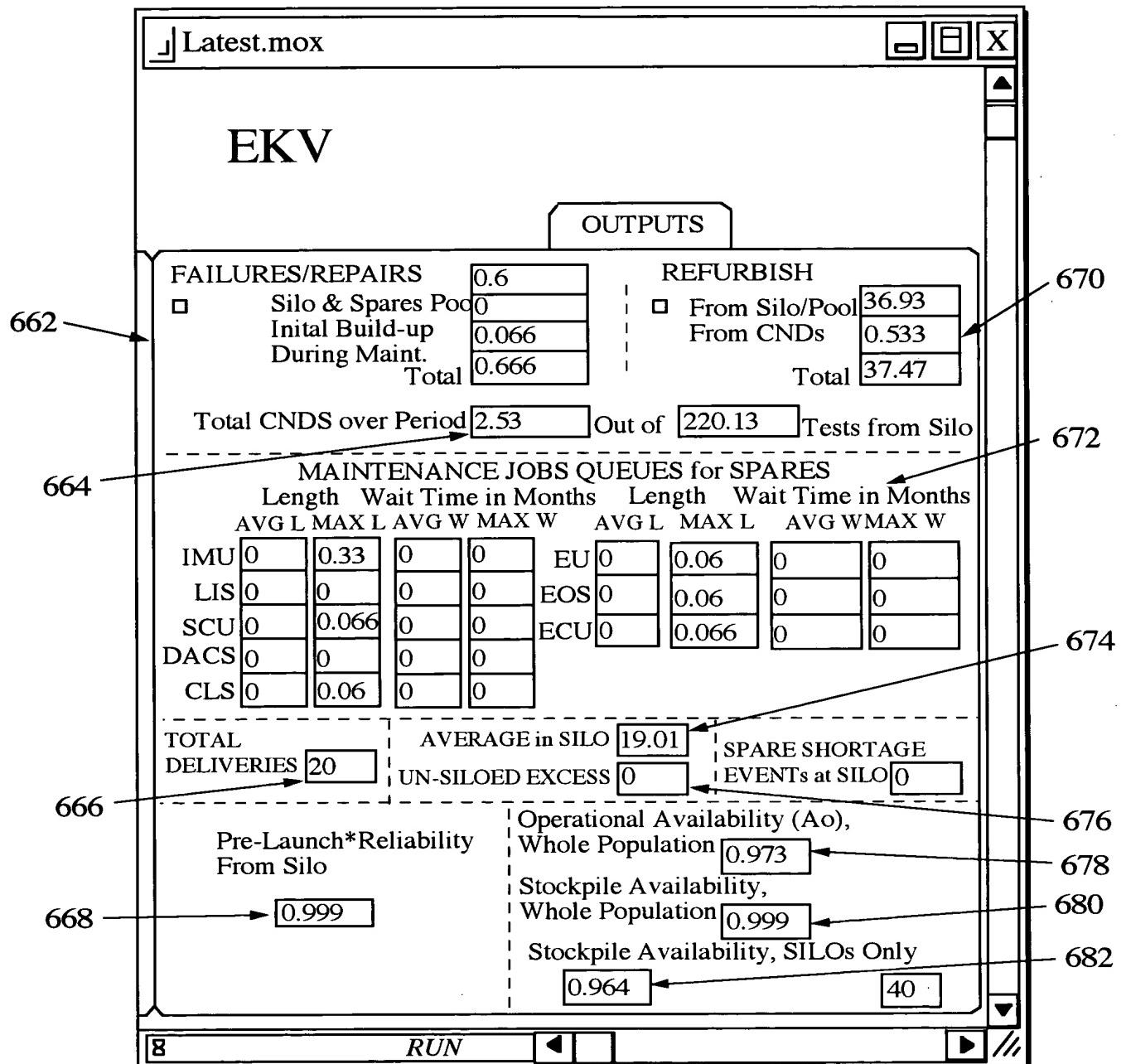


Fig. 27b